

RAK4-F Instruction Manual

For programming information: [Wireless RAK Programming guide](#)
or [Wired system Programming Guide](#)



For general system information: [Wireless RAK Application Sheet](#)
or [Wired RAK Application Sheet](#)

Overview:

A four channel dimming RAK, designed to be wall mounted in an electrical cupboard. The RAK4-F has four switched mains outputs and four “digital signal” outputs. These “digital signal” outputs can be configured to control 0-10V, DLI and DSI fittings.

NB

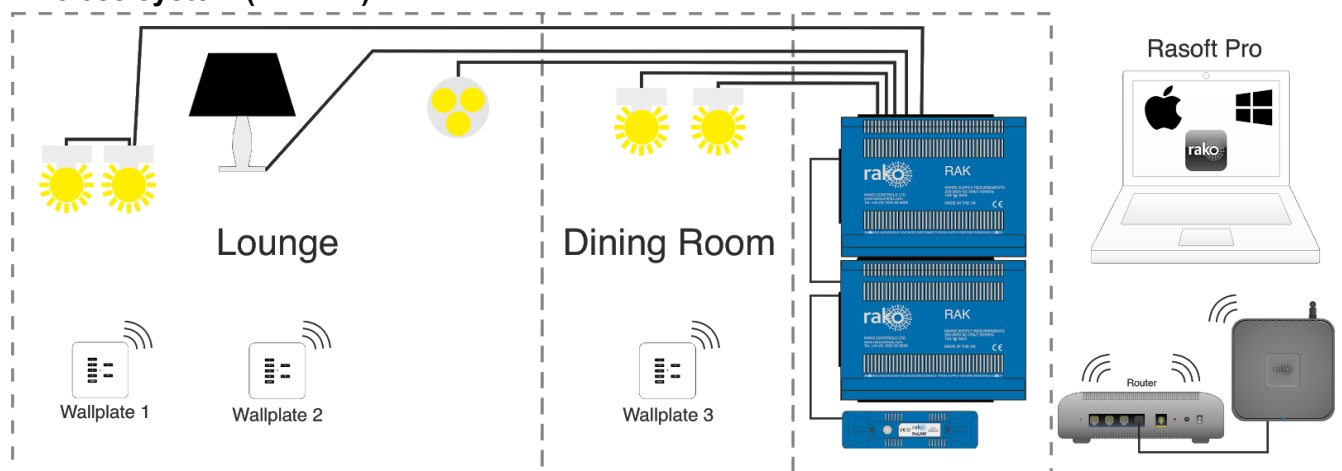
DLI signals from the RAK4-F are broadcast only. For addressable DLI the RSR/WSR-DLI is required.

The RAK4-F has a maximum loading of 5A per channel and 10A for the entire unit.

RAK4s, combined with a Link device (RxLINK or RAK-LINK) can either be used as a single 4 channel unit or formed into a “stack”. RAK4s can be also be used in combined stacks with RAK8-MB units on the same Link device.

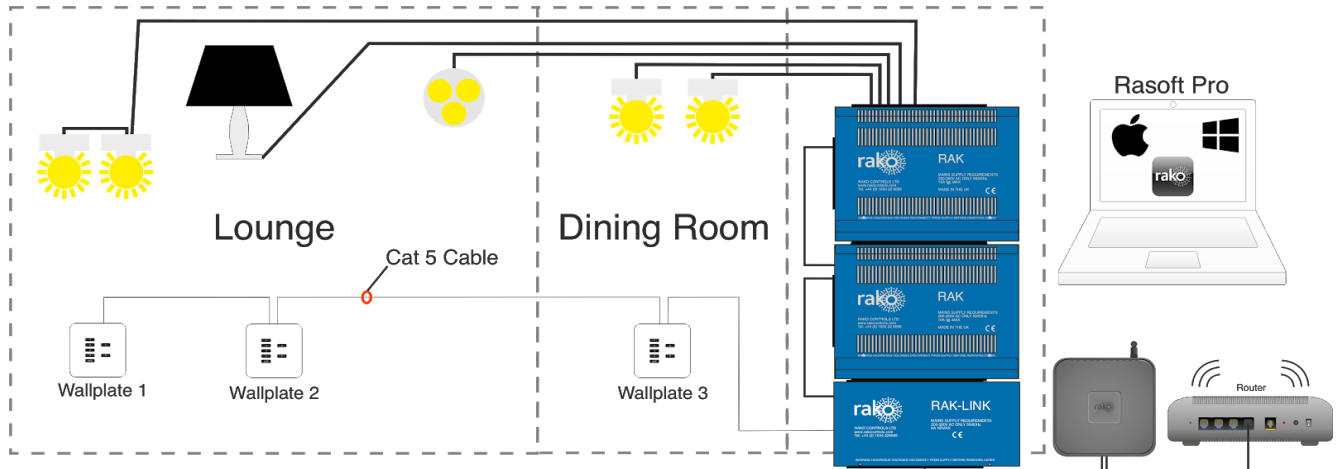
Before commencing installation of a Rako product first read this instruction manual carefully. Rako Controls Ltd. accepts no responsibility for any damage or injury caused by incorrect installation of a Rako product. Installation should only be carried out by a qualified electrician. Always install RAK units in a well ventilated room, with a minimum clearance of 50mm at the sides in the correct orientation i.e. vents top and bottom. Each RAK unit must be earthed.

Wireless system (RxLINK):



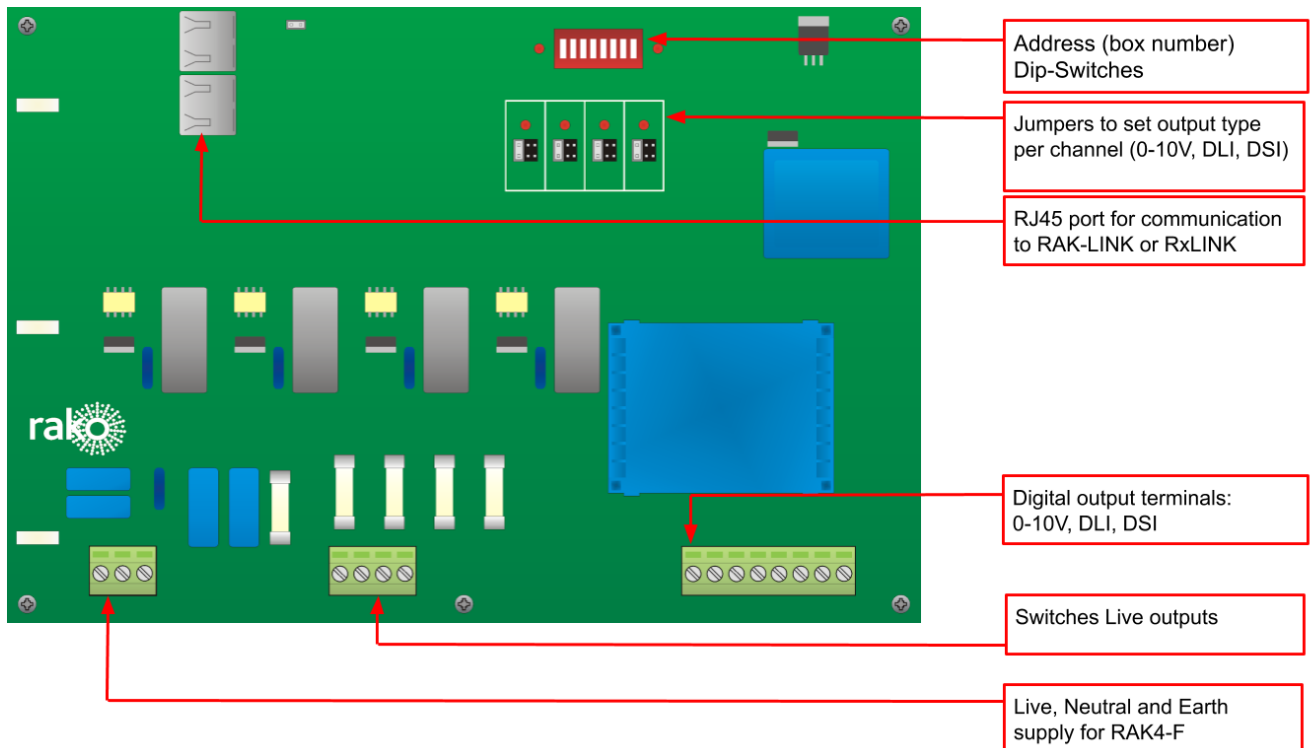
The RxLINK is used to integrate the RAK(s) into the wireless system and can support a total of 16 circuits. For example two RAK8s or one RAK8 and two RAK4s.

Wired system (RAK-LINK):



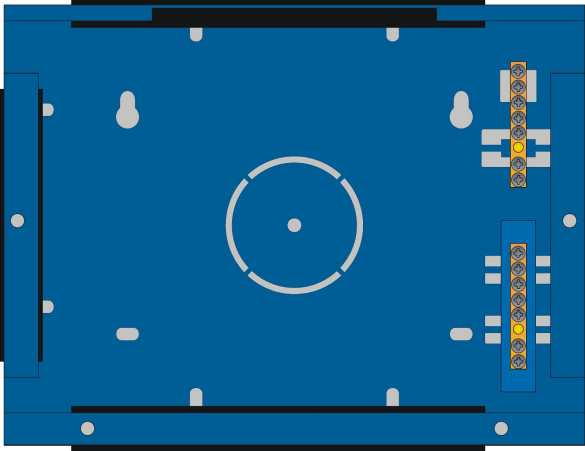
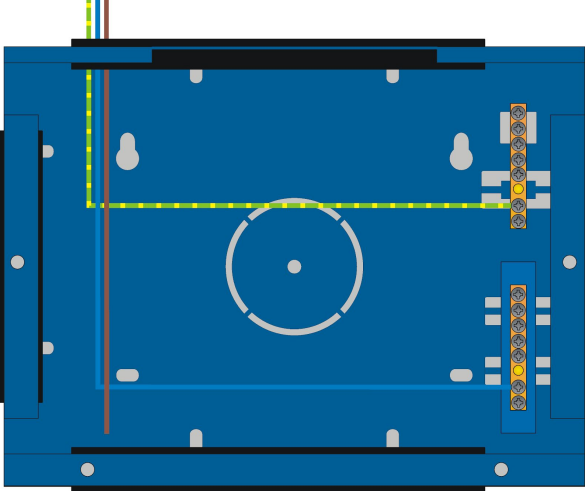
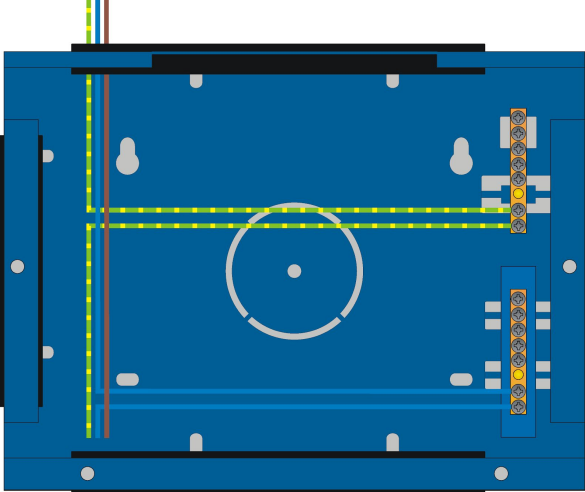
The RAK-LINK is used to integrate the RAK(s) into the Rako Wired Network and can support a total of 32 circuits. For example 4 RAK8s or 3 RAK8s and 2 RAK4s.

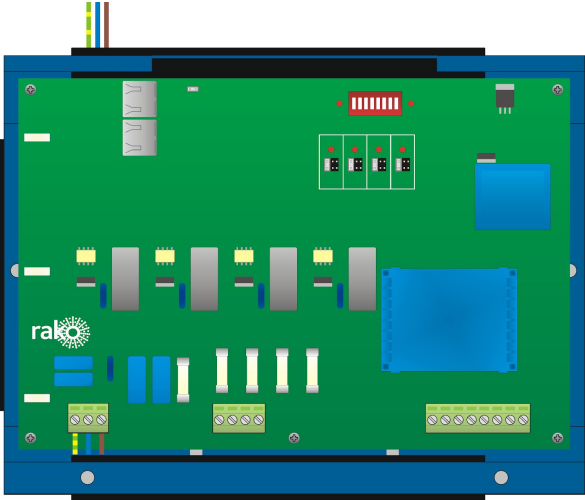
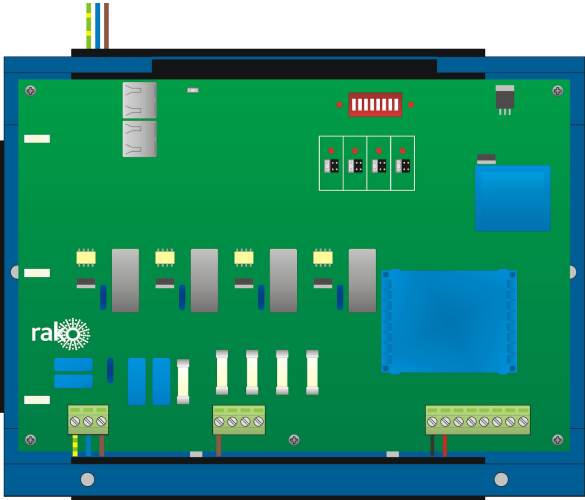
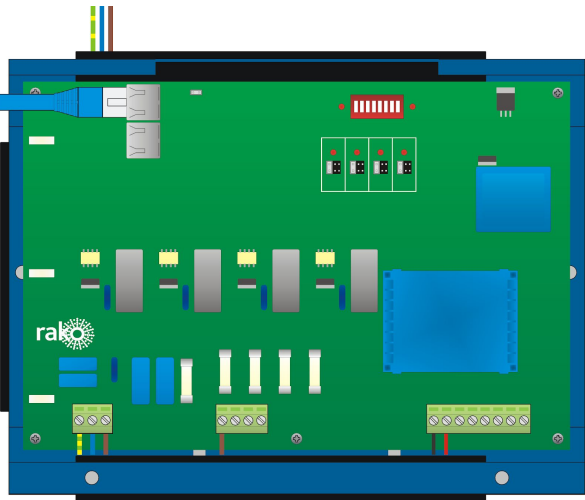
Circuit Board:



Installation:

POWER SHOULD BE ISOLATED THROUGHOUT THE INSTALLATION PROCESS

<p>Step 1</p>		<p>Secure metal box housing to wall or secure mounting position.</p> <p>The RAK system relies on being vertically mounted to allow the ventilation system to work properly.</p>
<p>Step 2</p>		<p>Bring a separate protected supply to each RAK case.</p> <p>Connect the Neutral and Earth to the busbars as shown.</p> <p>Bring the Live to the front of the metalwork ready for connection to the circuit board.</p>
<p>Step 3</p>		<p>Bring a single Neutral and Earth from the busbars to the front of the metalwork.</p> <p>Prepare screws on either side of metalwork ready to hold the circuit board. They should be present and screwed loosely into the case.</p>

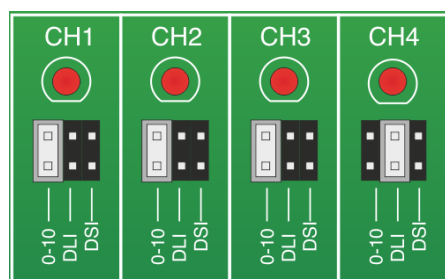
<p>Step 4</p>		<p>Place the circuit board on the two screws on either side of the metalwork.</p> <p>Do not screw down at this stage as the busbars need to be accessible for Neutral/Earth connections of lighting circuits.</p> <p>Connect Live, Neutral, Earth for board supply as indicated.</p>
<p>Step 5</p>		<p>Begin connecting lighting loads.</p> <p>Connect Neutral and Earth to appropriate busbars in the back of the casing.</p> <p>Make Live connections to the 4 way terminal block as shown or for as many circuits as used.</p> <p>Make Digital Output connections to the 8 way terminal block as shown for as many circuits as used.</p>
<p>Step 6</p>		<p>Insert the RJ45 cable from the RAK-LINK/RxLINK into the port on the RAK4-F.</p> <p>Screw down the circuit board to secure it of the case and fit lid to complete installation</p> <p>Select Digital output type by setting the jumpers on the circuit board.</p> <p>NB See "Setting Digital Output Type" section below.</p>

Setting Digital Output Type:

Each channel of RAK4-F can be configured for either 0-10V, DLI (broadcast) or DSI operation. Default factory setting is 0-10V. The digital output type is edited by either setting the jumpers on the circuit board or by using the software depending on the age of the RAK4-F.

Issue C Boards (jumpers fitted)

When jumpers are fitted they MUST be used to set the output type, the method using Rasoft Pro will not work.



The digital output type is set by using the jumpers on the circuit board. Output type can be set separately for each channel of the RAK4-F. If all jumpers are removed then the RAK4-F will default to 0-10V mode.

NB

For example in the picture above Channels 1, 2 and 3 are set to “0-10V” and Channel 4 is set to “DLI”.

Issue A/B Boards (no jumpers fitted)

For older board types the output setting is set via Rasoft Pro. Before setting the output type the software must:

- Be connected to an appropriate programming device (Bridge or RAMPI)
- Have programmed the RAK4-F such that it has been assigned a Room and a Channel.

Select “RAK-CIRCUIT” within the device editor and then edit the “Output Options” tab. Press “Save and Upload” to upload this change to the RAK4-F.

Rako thanks you for having purchased a Rako product and hopes that you are pleased with your system. Should for any reason you need to contact us please contact us via our website www.rakocontrols.com or by phoning our customer help line on 01634 226666.

